

LYASHKEVICH, Z.M.; MEL'NIK, Yu.M.; VOZNYAK, D.K.

Mineralogy and genesis of the pelikanites of Koresten pluton. Min.
sbor. 18 no.4:456-451 '64. (MIRA 18:7)

1. Institut geologii i geokhimii goryuchikh iskopayemykh AN UkrSSR,
L'vov i Gosudarstvennyy universitet imeni Franko, L'vov.

MEL'NIK, Yu.M.; RAZUMEYEVA, N.N.

Mineralogy of the pyrophyllite schists of Zbranok. Min. sbor. no.17:
162-169 '63. (MIRA 17:11)

1. Gosudarstvennyy universitet imeni Franko, L'vov.

MEL'NIK, YU. P.

MEL'NIK, Yu.P.

Shkhel'da glacier. Priroda 46 no.5:113 My '57.

(MLBA 10:6)

1. Institut geologicheskikh nauk Akademii nauk USSR (Kiyev).
(Caucasus--Glaciers)

MEL'NIK, Yuriy Petrovich [Mel'nyk, I.U.P.]; BELEVTSSEV, Ya.M. [Believtsev, I.A.M.], otv.red.; MEL'NIK, I.F. [Mel'nyk, I.F.], red.isd-va; ROZENTSVEYG, Ye.H. [Rozentsveig, I.E.M.], tekhred.

[Changes in rocks during the formation of iron ores in the central part of the Saksagan area in the Krivoy Rog Basin] Zminy porid pry utvorenni zaliznykh rud v sarednii chastyni Saksahans'koi smuhy Kryvoriz'koho basainu Kyiv, Izd-vo akad. nauk URSR, 1958. 74 p. (Akademiia nauk URSR, Instytut geologichnykh nauk. Trudy, no.3).

(MIRA 12:7)

1.Chlen-korrespondent AN USSR (for Belevtsev).
(Saksagan' Valley--Rocks)

AUTHOR: Mel'nik, Yu.P. SOV-21-58-9-23/28

TITLE: Magnetite Ores of the Saksaganskogo Rayon in the Krivoy Rog Basin (Magnetitovyye rudy Saksaganskiy rayona Krivorozhskogo basseyna)

PERIODICAL: Dopolvidi Akademii nauk Ukrain's'koi RSR, 1958, Nr 9, pp 1002 - 1005 (USSR)

ABSTRACT: Most of the deposits of rich iron ores of the Saksagan rayon in the Krivoy Rog basin are located in the oxidation zone and has martite, hematite-martite or goethite-hematite composition. Recently, ore bodies occurring among the non-oxidized ferruginous rocks and composed of magnetite ores were discovered in this district. The largest of these deposits is located at the mine imeni Frunze. The mineral composition of the ores is as follows: magnetite, hematite, musketo-vite, quartz, chlorites, micas, etc. Both the mineral and chemical composition of the ores corresponds to that of the enclosing ferruginous rocks. One can draw an analogy between the magnetite and martite ores in respect to their texture, structure and composition. In comparing these properties,

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SOV-21-58-9-23/28

Magnetite Ores of the Saksaganskiy Rayon in the Krivoy Rog Basin

the author comes to a conclusion as to their genetic relationship, namely that martite ores were formed from primary magnetite ores in the hypergenesis zone. There are 2 photos, 1 table and 2 Soviet references.

ASSOCIATION: Institut geologicheskikh nauk AN UkrSSR (Institute of Geological Sciences of the AS UkrSSR)

PRESENTED: By Member of the AS UkrSSR, N.P. Semenenko

SUBMITTED: April 9, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration

1. Geophysical prospecting--USSR
2. Iron ores--Deposits
3. Iron ores--Composition

Card 2/2

YEPATKO, Yu.M. [Ispatko, IU.M.]; MEL'NIK, Yu.P. [Mel'nyk, IU.P.]

Role of supergene leaching out of quartz during the enriching of
iron rocks and ores from the Saksagan' area of the Krivoy Rog
Basin. Geol.shur. 18 no.5:63-69 '58. (MIRA 12:1)
(Krivoy Rog Basin--Iron-ores) (Ore dressing)

SOV/20-120-5-46/67

AUTHOR: Mel'nik, Yu. P.

TITLE: A Case of Transition of Martite Ores Into Magnetite Ores in the Saksagan Region of the Krivoy-Rog Basin (Sluchay perekhoda martitovykh rud v magnetitovyye v saksaganskom rayone Krivorozhskogo basseyna)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 5, pp. 1095 - 1098 (USSR)

ABSTRACT: The overwhelming majority of the known ore deposits of the mentioned district consists of oxidized ores composed of martite, hematitic martite or goethite-hematite. Magnetite ores were found only in considerable depths. Unoxidized ores from the Frunze pit are of interest. The deposit "North" (Severnaya) which is of a thickness of 50 m and of a length of 400 m was formed by mineralization of magnetite - hornstone of the 4th iron-containing zone in the anticlinal part of the Saksagan strip. The contact with the containing rocks is folded (Fig 1). The mentioned ores are almost completely oxidized until a depth of 220 - 250 m. At a depth of 280 m the ores are only partly oxidized and finally at a depth of 400 - 500 m only unoxidized magnetite ores are found. They are described individually. The results of chemical analyses

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A Case of Transition of Martite Ores Into Magnetite
Ores in the Saksagansk Region of the Krivoy-Rog Basin

SOV/20-120-5-46/67

(Table 1) show that the aluminum and magnesia content increases in the metasomatically changed ores although the qualitative composition (according to the spectral analysis) remains unchanged. In conclusion the oxidation process of individual ore varieties is described. The close contact of the oxidized and unoxidized ores, the fact that the former are bound to the upper zones of exploitation as well as to the tectonic contact of the rocks of the intermediate and the upper series indicate that the martite ores without any doubt were formed by the oxidation of the magnetite ores by descending hypogene waters. This is also confirmed by gradual transitions in the maintenance of structural and textural peculiarities. There are 2 figures, 1 table, and 3 references, 3 of which are Soviet.

ASSOCIATION: Institut geologicheskikh nauk Akademii nauk SSSR (Institute of Geology, AS USSR)

Card 2/3

A Case of Transition of Martite Ores Into Magnetite
Ores in the Saksagan Region of the Krivoy-Rog Basin

SOV/20-120-5-46/67

PRESENTED: February 28, 1958, by D.S.Korzhinskiy, Member, Academy of
Sciences, USSR

SUBMITTED: February 25, 1958

1. Iron ores--Analysis
2. Iron ores--Oxidation
3. Iron ores
- Magnetic properties
4. Iron ores--Spectra

Card 3/3

MEL'NIK, Yu. P., Candidate Geolog-Mineralog Sci (diss) -- "Changes in the rock in the formation of iron ores in the central portion of the Saksagan' belt of the Krivoy Rog Basin". Kiev, 1959. 16 pp (Min Higher Educ Ukr SSR, Kiev State U in T. G. Shevchenko), 150 copies (KL,, No 24, 1959, 130)

MEL'NIK, Yu. P.

BELEVTSSEV, Yakov Nikolayevich; BURA, Galina Georgiyevna; DUBINKINA, Raisa Pavlovna; YEPATKO, Yuriy Mikhaylovich; ISHCHEKHO, Dmitriy Ivanovich; MEL'NIK, Yuriy Petrovich; SERYGIN, Aleksey Il'ich. Prinimali uchastiye: KOZHARA, V.L.; KRAVCHENKO, V.M.; TAKHTUYEV, G.V.; SHCHERBAKOVA, K.F.; RODIONOV, S.P., otv.red.; ZAVIRYUKHINA, V.N., red. izd-va; YEFIMOVA, M.I., tekhn.red.

[Genesis of iron ores in the Krivoy Rog Basin] Genezis zheleznykh rud Krivorozhskogo basseina. Kiev, Izd-vo Akad.nauk USSR, 1959. 306 p. (MIRA 13:2)

1. Chlen-korrespondent AN USSR (for Rodionov).
(Krivoy Rog Basin--Iron ores)

MAKSIMOVICH, V.L. [Maksymovych, V.L.]; MEL'NIK, Yu.P. [Mel'nyk, IU.P.]

Relationship between iron ores and diabasic dikes in the Saksagan'
region of the Krivoy Rog Basin. Geol. zhur. 19 no.5:73-77 '59.
(MIRA 13:2)

(Krivoy Rog Basin--Iron ores) (Krivoy Rog Basin--Dikes (Geology))

MEL'NIK, Yu. P., Cand Geol-Min Sci -- (diss) "Comparative characteristic of the high-grade ores and ferrous rocks of the Saksagan-skiy Rayon of the Krivoy Rog." L'vov, 1960. 15 pp; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, L'vov State Univ im Iv. Franko); 150 copies; price not given; (KL, 30-60, 137)

BELEVITSEV, Ya.N. [Beliavtsev, I.A.M.]; MEL'NIK, Yu.P.;
STRIGIN, O.I. [Stryhin, O.I.]

Mineralogical characteristics of iron ores and migmatites in
the Ingulets Valley. Trudy Inst.geol.nauk AN URSR. Ser.petr.,min.
ta geokhim. no.6:136-140 '60. (MIRA 15:12)
(Krivoy Rog Basin--Iron ores)
(Krivoy Rog Basin--Migmatites)

MEL'NIK, Yu.P.

Migration of elements during the formation of iron ores in the
Saksagan' Valley of the Krivoy Rog Basin. Trudy Inst.geol.nauk
AN URSR. Ser.petr.,min. ta geokhim. no.6:141-156 '60. (MIRA 15:12)
(Saksagan' Valley—Iron ores)

MEL'NIK, Yu.P.

Ilmenite from granitised ferruginous rocks of the Krivoy Rog Basin.
Zap. Vses. min. ob-va 89 no.3:348-353 '60. (MIRA 13:8)

1. Institut geologicheskikh nauk, Kiev.
(Krivoy Rog Basin—Ilmenite)

BELEVTSSEV, Ya.N.; FOMENKO, V.Yu.; NOTAROV, V.D.; MOLYAVKO, G.I.; MEL'NIK,
Yu.P.; SIROSHTAN, R.I.; DOVGAN', M.N.; CHERNOVSKIY, M.I.;
SHCHERBAKOVA, K.F.; ZAGORUYKO, L.G.; COROSHNIKOV, B.I.;
AKIMENKO, N.M.; SEMERGEYEVA, Ye.A.; KUCHER, V.N.; TAKHTUYEV,
G.V.; KALYAYEV, G.I.; ZARUBA, V.M.; NAZAROV, P.P.; MAKSIMOVICH,
V.L.; STRUYEVA, G.M.; KARSHENBAUM, A.P.; SKARZHINSKAYA, T.A.;
CHEREDNICHENKO, A.I.; GERSHOYG, Yu.G.; PITADE, A.A.; RADUTSKAYA,
P.D.; ZHILKINSKIY, S.I.; KAZAK, V.M.; KACHAN, V.G.; STRYGIN,
A.I., red.; LADIYEVA, V.D., red.; ZHUKOV, G.V., red.; YEPATKO,
Yu.M., red.; SHCHERBAKOV, B.D., red.; SLENZAK, O.I., red. izd-va;
RAKHLINA, N.P., tekhn. red.

[Geology of Krivoy Rog iron-ore deposits] Geologiya Krivorozhskikh
zhelezorudnykh mestorozhdenii. Kiev, Izd-vo Akad. nauk USSR.
Vol. 1. [General problems in the geology of the Krivoy Rog Basin.
Geology and iron ores of the deposits of the "Ingulets,"
Rakhmanovo, and Il'ich Mines] Obshchie voprosy geologii Krivbassa.
Geologicheskoe stroenie i zheleznye rudy mestorozhdenii rudnikov
"Ingulets," Rakhmanovskogo i im. Il'icha. 1962. 479 p.
(Krivoy Rog Basin--Mining geology) (MIRA 16:3)
(Krivoy Rog Basin--Iron ores)

DAVITAYA, F.F.; MEL'NIK, Yu.S.

Radiation heating of the active surface and the timber line. Meteor.
i gidrol. no.1:3-9 Ja '62. (MIRA 15:1)
(Timber line)

MEL'NIK, Yu.P. [Mel'nyk, IU.P.]

At the Ukrainian Branch of the All-Union Mineralogical Society.
Geol.zhur. 22 no.1:114 '62. (MIRA 15:2)
(Ukraine—Mineralogical societies)

MEL'NIK, Yu.P. [Mel'nyk, IU.P.]

Possible relationship between the equilibrium and anisotropic energy of rocks and their resistance to granitisation. Geol. zhur. 22 no.6:10-22 '62. (MIRA 16:2)

1. Institut geologicheskikh nauk AN UkrSSR.
(Granitization)

MEL'NIK, Yu.P.; YAROSHCHUK, M.A.

Find of scheelite in metasomatites of the Krivoy Rog region.
Zap.Vses.min.ob-va 92 no.2:246-250 '62. (MIRA 15:6)

1. Institut geologicheskikh nauk AN USSR, Kiyev.
(Krivoy Rog Basin--Scheelite)
(Krivoy Rog Basin--Metasomatite)

MEL'NIK, Yu.P.; STRYGIN, A.I.

Mineralogy of metasomatites in the migmatite field of the Krivoy
Rog Basin. Min. sbor. no.17:193-204 '63. (MIRA 17:11)

1. Institut geologicheskikh nauk AN UkrSSR, Kiyev.

MEL'NIK, Yu.P. [Mel'nyk, IU.P.]

Possible siderite oxidation by water under conditions of
regional metamorphism. Dep. AN URSR no.3:361-365 '64.
(MIRA 17:5)

1. Institut geologicheskikh nauk AN UkrSSR. Predstavleno
akademikom AN UkrSSR V.G. Bondarchukom [Bondarchuk, V.H.].

MEL'NIK, Yu.P.

Thermodynamic analysis of conditions governing the formation of ore minerals during the metamorphism of iron ore formation. Geol. rud. mestorozh. 6 no.5:3-14 S-O '64. (MIRA 17:12)

1. Institut geologicheskikh nauk AN UkrSSR, Kiyev.

L 6812-65 BWT(1)/EWT(m)/T/EEG(b)-2/ENP(q)/ENP(b) LJP(c)/AS(mp)-2/ASD(a)-5/
SSD/AFWL/ASD(f)/ESD(t)/RAEM(t) GG/JD/JG

ACCESSION NR: AP4Q44650

8/0048/64/028/008/1337/1339

AUTHOR: Gorodetskiy, D.A.; Kornev, A.M.; Mel'nik, Yu.P.

TITLE: Structure of an adsorbed barium film on a (110) face of a tungsten single crystal /Report, Third All-Union Conference on Semiconductor Compounds held in Kishinev 16-21 Sept 1963/

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.8, 1964, 1337-1339

TOPIC TAGS: thin film, adsorption, electron diffraction, tungsten, single crystal, barium

ABSTRACT: The structure of adsorbed barium films on a (110) face of a tungsten crystal was investigated by slow electron diffraction under conditions such that the diffraction pattern could be continuously observed on a fluorescent screen. The electron diffraction apparatus has been described elsewhere (D.O.Gorodets'kiy and O.M. Kornev, Ukr.fiz.zh.6,422,1961). The tungsten crystal measured 8 x 6 x 0.5 mm³; it was etched before it was mounted and could be heated by electron bombardment from behind. The barium was evaporated from an electrically heated tantalum tube. The thickness of the film was estimated from the measured contact difference of poten-

L 5812-65

ACCESSION NR: AP4044680

tial between the crystal with its adsorbed layer and the cathode of the electron gun. After being heated to 2500°K the crystal produced an electron diffraction pattern characteristic of the (110) face of tungsten. When the crystal was left at room temperature for several hours at 2×10^{-9} mm Hg, weak diffraction maxima appeared which are ascribed to the ordered structure of an adsorbed gas film. The tungsten diffraction pattern gradually weakened when barium was evaporated onto the cold surface, and when the barium film became thick, as evinced by a value of the work function characteristic of thick barium films, the diffraction pattern disappeared entirely. When the crystal with its disordered barium film was heated to 800°K the first signs of a new diffraction pattern appeared, and the new pattern became strong after 10 min heating at 900°K. This new pattern was found to correspond to an ordered structure with one barium atom for every eight tungsten atoms (the "8 x 1" structure). When the crystal was heated above 900°K the "8 x 1" structure pattern gradually gave way to the diffraction pattern characteristic of the tungsten surface. Evidence of a more dense structure was sought by gradually evaporating barium onto the tungsten surface at different temperatures. Some evidence of a "4 x 1" structure was found, but the diffraction maxima were too weak to be photographed. The authors express their deep gratitude to Prof. G.N. Shuppe and his co-

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L 6812-65

ACCESSION NR: AP4044B50

workers for making available the tungsten single crystal." Orig.art.has: 1 formula and 2 figures.

ASSOCIATION: Kafedra elektroniki Kiyevskogo gosudarstvennogo universiteta (Electronics Department, Kiev State University)

SUBMITTED: OC

ENCL: 00

SUB CODE: 88

NR REF SOV: 003

OTHER: 001

3/3

YEPATKO, Yu.M. [IEpatko, IU.M.]; MEL'NIK, Yu.P. [Mel'nyk, IU.P.]

Some experimental and theoretical data on the formation of goethite and hematite in the weathering surface of the Krivoy Rog iron ore basin. Geol. zhur. 25 no.2:12-21 '65. (MIRA 18:6)

1. Institut geologicheskikh nauk AN UkrSSR.

MEL'NIK, Yu. P. [Mel'nyk, IU.P.]

Theoretical data on the stability of siderite during metamorphism.
Geol. zhur. 24 no.5:16-29 '64. (MIRA 17:12)

1. Institut geologicheskikh nauk AN UkrSSR.

MAGAK'YAN, I.G.; AKIMENKO, N.M.; BELEVTSSEV, Ya.N.; GERSHOYG, Yu.G.;
GRECHISHNIKOV, N.P.; KALYAYEV, G.I.; KARSHENBAUM, A.P.;
KRAVCHENKO, V.M.; KULISHOV, M.P.; MAKSIMOVICH, V.L.; MEL'NIK,
Yu.P.; PITADE, A.A.; SKURIDIN, S.A.; STRIGIN, A.I.; FEDORCHENKO,
V.S.; FOMENKO, V.Yu.

Reviews and bibliography. Geol. rud. mestorozh. 7 no.3:113-
117 My-Je '65. (MIRA 18:7)

L 9251-66 EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG

ACC NR: AP5022723

SOURCE CODE: UR/0181/65/007/009/2780/2788

AUTHOR: Gorodetskiy, D. A.; Mei'nik, Yu. P. 71/55 44 55 44 55

ORG: Kiev State University im. T. G. Shevchenko (Kiyevskiy gosudarstvennyy universitet) 44 55

TITLE: Structure of barium oxide films on surface (110) of a tungsten single crystal 2/ 44.55, 14

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2780-2788

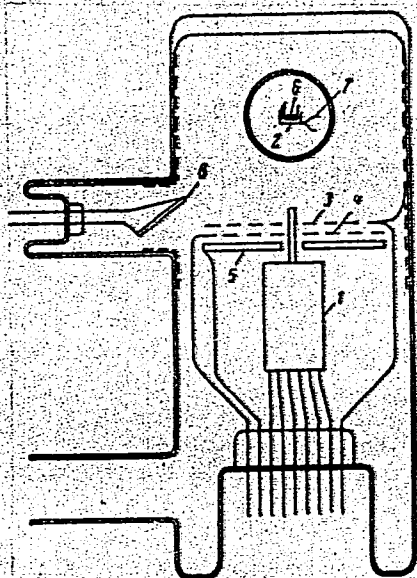
TOPIC TAGS: tungsten, single crystal, epitaxial growing, x ray diffraction analysis, barium oxide, ceramic film

ABSTRACT: The authors describe a newly designed device for studying barium oxide films on tungsten by visual observation of the diffraction pattern on a luminescent screen. Electrons from the specimen pass through the first grid and fall into the decelerating field generated by the second grid. Elastically reflected electrons have sufficient energy to overcome this potential field and are accelerated to 4 kev, activating the luminescent screen. The structures of both monomolecular and thick (5-20 molecular layers) films of BaO were studied on the (110) face of a tungsten single crystal. The two-dimensional reciprocal lattices of the specimens are shown as well as photographs of the diffraction patterns. The molecules in a monomolecular layer have an ordered arrangement after heating, with one molecule of BaO per eight atoms

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ACC NR: AP5022723



of tungsten. Thick layers of barium oxide have a crystalline structure with face (100) parallel to the tungsten surface. When a thick layer of BaO is vaporized onto the monomolecular structure, a change in observed in the orientation of the crystals. When thick layers of vaporized BaO are heated, the resulting diffraction pattern may be attributed to an oriented layer of Ba_3WO_6 . The creation of two-dimensional ordered structures on the surface of a crystal may be applied in some practical instances for controlling epitaxial growth. Orig. art. has: 6 figures.

Fig. 1. Diagram of the experimental instrument: 1--electron gun; 2--crystal; 3 and 4--grids; 5--luminescent screen; 6--spiral for heating the crystal; 7--thermocouple; 8--BaO source

SUB CODE: 20/

SUBM DATE: 14Apr65/

ORIG REF: 005/

OTH REF: 006

Card 2/2 pu

ACC NR: AP7002166

SOURCE CODE: UR/0089/66/021/006/0483/0492

AUTHOR: Drozdovskaya, A. A.; Mel'nik, Yu. P.

ORG: none

TITLE: Some thermodynamic data on the stability of uraninites of variable composition in hypergenic conditions

SOURCE: Atomnaya energiya, v. 21, no. 6, 1966, 483-492

TOPIC TAGS: uranium compound, thermodynamic calculation, fissionable metal ore, oxidation reduction reaction, solubility

ABSTRACT: The authors present result of thermodynamic calculations of the stability fields of uraninites with different oxygen coefficients in pure water at 25°C and atmospheric pressures. The purpose of the calculation was to bring some earlier published data up to date, in view of the importance of this information for the extraction of fissionable minerals. The stability of the anhydrous oxides of uranium of various compositions was determined as a function of the volatility of the oxygen at 25C. The results showed that uranium oxides of variable composition (U_4O_9 -- U_3O_8) are unstable in liquid water in the presence of oxidation-reduction processes, but the rate of dissociation is slow and metastable uraninites can be regarded as stable under hypergenic conditions. The dependence of the stability of the metastable uranium ox-

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UDC: 550.4:553.492

ACC NR: AP7002166

ides on the UO_3/UO_2 ratio is established and it is found that the stability decreases with increasing oxygen coefficient. The ionic solubility of the uraninite in aqueous solutions containing no complex-forming ions is determined for different values of pH, and it is found that when pH ranges from 4 to 8 the uranium is predominately in the form of UOH^{3+} and UO_2OH^+ . The dependence of the solubility on the pH varies in character. When the oxides have a low oxygen coefficient, the solubility increases rapidly with increasing pH, but at high degree of oxidation this decrease is slower. Other forms that uranium may assume in solutions and the stabilities of nonhydrated and hydrated uranium oxides are discussed. Conditions under which uranium migrates and is precipitated from natural aqueous solutions in the hypergenesis zone are discussed. Orig. art. has: 5 figures, 4 tables, and 23 formulas.

SUB CODE: 08, 18/ SUBM DATE: 31May66/ ORIG REF: 010/ OTH REF: 013

Card 2/2

MEL'NIK, Yu. S.

RAZUMOVA, L.A.; MEL'NIK, Yu. S.

Water supply for spring wheat existing under main cultivation
methods in the Kazakhstan steppes. Meteor. i gidrol. no. 3:15-24
Mr '57. (MLRA 10:5)

(Kazakhstan--Wheat)
(Kazakhstan--Soil moisture)

MEL'NIK, Yu.S.

Practice in the calculation on a rapid calculating machine
the relationship between the yield of sunflower and the
moistering conditions. Meteor. i gidrol. no.11:25-28 N '63.
(MIRA 16:11)

1. Tsentral'nyy institut prognozov.

MEL'NIK, Yu.S.

Calculation of the duration of the period from sowing to
maturing of sunflowers. Meteor. i gidrol. no.12:35-38 D '64
(MIRA 18:1)

1. Laboratoriya agrometeorologicheskikh prognozov Instituta
prikladnoy geofiziki.

MEL'NIK, Yu.S.

Evaluation of the conditions for moisture security and the formation
of the crop of sunflower seeds in the Northern Caucasus. Trudy MSIP
no.145:139-146 '65. (MIRA 18:10)

MELENIK, Yu.S.

Agrometeorological indexes for forecasting the rates of development
and evaluating the conditions of the sunflower harvest. Trudy
TSIP no.146:117-125 '65. (MIRA 18:9)

MEL'NIK, Z.O. [Mel'nyk, Z.O.]

Mixed problem for certain hyperbolic systems. Dop. AN URSR
no.3:314-318 '64. (MIRA 17:5)

1. L'vovskiy gosudarstvennyy universitet. Predstavleno
akademikom AN UkrSSR Yu.A. Mitropol'skim [Mytropol's'kyi,
IU.O.].

MEL'NIK, Z.O. [Mel'nyk, Z.O.]

A special mixed problem. Dop. AN URSS no.5:577-570 '64.(MIRA 17:6)

1. L'vovskiy gosudarstvennyy universitet. Predstavleno akademikom
AN UkrSSR Yu.A.Mitropol'skim [Mytropol's'kyi, IU.O.].

ACCESSION NR: AP4043828

5/0020/64/157/005/1039/1042

AUTHOR: Mel'nik, Z. O.

TITLE: Concerning one general mixed problem

SOURCE: AN SSSR. Doklady*, v. 157, no. 5, 1964, 1039-1042

TOPIC TAGS: integrodifferential equation, boundary value problem, initial value problem, hyperbolic equation, uniqueness theorem

ABSTRACT: The general mixed problem is considered for a two-dimensional integro-differential equation of arbitrary order in the form

$$\sum_{i=0}^m \sum_{j=0}^l a_{ij}(x, \eta) \frac{\partial^i u(x, \eta)}{\partial x^i \partial \eta^j} + \int_0^t \sum_{i=0}^{m-1} \sum_{j=0}^l b_{ij}(x, t, \tau) \frac{\partial^i u(x, \eta)}{\partial x^i \partial \eta^j} d\tau = f(x, \eta) \quad (1)$$

with initial conditions

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ACCESSION NR: AP4043828

$$\sum_{l=0}^m a_{ml}(x, t) \lambda^{m-l} \xi^l = \prod_{l=1}^m (\lambda - \lambda_l(x, t) \xi) \quad (2)$$

and boundary conditions

$$\sum_{l=0}^{m-1} \sum_{j=0}^l \alpha_{lj}^s(t) \frac{\partial^l u(0, t)}{\partial t^{l-j} \partial x^j} + \int_0^t \sum_{l=0}^{m-1} \sum_{j=0}^l \alpha_{lj}^s(t, \tau) \frac{\partial^l u(0, \tau)}{\partial t^{l-j} \partial x^j} d\tau = h_s^1(t) \quad (1 \leq s \leq p),$$

$$\sum_{l=0}^{m-1} \sum_{j=0}^l \beta_{lj}^s(t) \frac{\partial^l u(l, t)}{\partial t^{l-j} \partial x^j} + \int_0^t \sum_{l=0}^{m-1} \sum_{j=0}^l \beta_{lj}^s(t, \tau) \frac{\partial^l u(l, \tau)}{\partial t^{l-j} \partial x^j} d\tau = h_s^2(t) \quad (1 \leq s \leq q). \quad (3)$$

This problem contains as a particular case the general mixed problem for a general two-dimensional hyperbolic equation, which has been investigated heretofore by many mathematicians. It is proved that: if the coefficients $a_{mj}(x, t)$ ($0 \leq j \leq m$) are continuously differentiable $m + 1$ times in the rectangle Π [$0 \leq t \leq T$; $0 \leq x \leq l$] on the (x, t) plane on which the integro-differential equation is specified,

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ACCESSION NR: AP4043828

the coefficients $a_{ij}(x, t)$ and $b_{ij}(x, t, \tau)$ and the free term $f(x, t)$ are continuously differentiable m times in the rectangle Π , the initial functions $g_i(x)$ are continuously differentiable $2m - i - 1$ times respectively for $0 \leq x \leq l$, and the coefficients and free terms of the boundary conditions are continuously differentiable m times, and if the following condition is satisfied:

$$D_i(\eta) = \begin{vmatrix} \sum_{j=0}^{m-1} a_{m-1,j}^{(1)}(\eta) \lambda_1^{m-1-j}(\eta) & \dots & \sum_{j=0}^{m-1} a_{m-1,j}^{(1)}(\eta) \lambda_p^{m-1-j}(\eta) \\ \dots & \dots & \dots \\ \sum_{j=0}^{m-1} a_{m-1,j}^{(p)}(\eta) \lambda_1^{m-1-j}(\eta) & \dots & \sum_{j=0}^{m-1} a_{m-1,j}^{(p)}(\eta) \lambda_p^{m-1-j}(\eta) \end{vmatrix} \neq 0$$

($0 < \eta < T$).

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$$D_i(t) = \begin{vmatrix} \sum_{j=0}^{m-1} \beta_{m-1,j}^1(t) \lambda_{m-q+1}^{m-j-1}(t, \eta) & \dots & \sum_{j=0}^{m-1} \beta_{m-1,j}^1(t) \lambda_m^{m-j-1}(t, \eta) \\ \dots & \dots & \dots \\ \sum_{j=0}^{m-1} \beta_{m-1,j}^q(t) \lambda_{m-q+1}^{m-j-1}(t, \eta) & \dots & \sum_{j=0}^{m-1} \beta_{m-1,j}^q(t) \lambda_m^{m-j-1}(t, \eta) \end{vmatrix} \neq 0$$

(4) 1

(0 ≤ t ≤ T).

then the unique solution of equation (1), differentiable m times, and satisfying the initial and boundary conditions, exists. The conditions (4) are essential for unique solvability of the problem. Orig. art. has: 10 formulas. This report was presented by I. N. Vekua.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Ivana Franko (L'vov State University)

SUBMITTED: 21Mar64

ENCL: 00

SUB CODE: MA

NR REF SOV: 004

OTHER: 004

Card 4/4

MEL'NIK, Z.O. [Mel'nyk, Z.O.]

Mixed problem for a general hyperbolic equation of the second order on a plane. Dop. AN URSR no.4:419-422 '65. (MTRA 18:5)

1. L'vovskiy gosudarstvennyy universitet im. Iv. Franko.

MEL'NIK, Z.O. [Mel'nyk, Z.O.]

General mixed problem for a system of integrodifferential equations. Dop. AN URSR no.6:687-690 '65.

(MIRA 18:7)

1. L'vovskiy gosudarstvennyy universitet.

MEL'NIK, Z.O. (L'vov); MYSHKIS, A.D. (Khar'kov)

Mixed problem for a two-dimensional hyperbolic system of the
1st order with discontinuous coefficients. Mat.sbor. 68
no.4:632-638 D '65. (MIRA 18:12)

1. Submitted February 2, 1965.

000819-66 EWT(d) IJF(c)
ACCESSION NR: AP5021262

UR/0020/65/163/005/1065/1068

AUTHOR: Mel'nik, Z. G.

TITLE: Solvability of general mixed problems in a right cylinder for analytic hyperbolic integro-differential equations

SOURCE: AN SSSR. Doklady, v. 163, no. 5, 1965, 1065-1068

TOPIC TAGS: differential equation, integral equation, hyperbolic equation

ABSTRACT: The author considers

$$\sum_{|k| \leq m} a_{(k)}^0(x, t) \frac{\partial^{(k)} u(x, t)}{\partial t^0 \partial x_1^{k_1} \dots \partial x_n^{k_n}} +$$

$$+ \int_0^t \sum_{|k| \leq m-1} a_{(k)}^1(x, t, \tau) \frac{\partial^{(k)} u(x, \tau)}{\partial \tau^0 \partial x_1^{k_1} \dots \partial x_n^{k_n}} d\tau = f(x, t) \quad (1)$$

$$[(k) = (k_0, k_1, \dots, k_n); |k| = k_0 + k_1 + \dots + k_n; a_{m,0,\dots,0}^0(x, t) \equiv 1],$$

with boundary conditions

$$\sum_{|k| \leq m-1} \left\{ \partial_{t_1}^k (1, t) \frac{\partial^{(k)} u(y, t)}{\partial t^0 \partial y_1^{k_1} \dots \partial y_n^{k_n}} + \right. \quad (2)$$

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100819-66

ACCESSION NR: AP5021262

$$\left\{ b_{ik}^j(y, t, \tau) \frac{\partial^{(k)} u(y, \tau)}{\partial \tau^k \partial y_1^{k_1} \dots \partial y_n^{k_n}} d\tau \right\} = h_i(y, t) \\ (y, t) \in \bigcup_{k=1}^m S_T^k, \quad 1 \leq i \leq m$$

and initial functions

$$\partial^k u / \partial t^k|_{t=0} = g_k(x) \quad (0 \leq k \leq m-1, x \in G). \quad (3)$$

As an extension of a previous paper (DAN, 157, No. 5, 1039, 1964), the author shows that if the coefficients and free terms in (1) and the boundary functions are analytic, and if

$$D_i(y, t) = \det \| \gamma_{ip}(y, t) \|_{p=1}^m \neq 0 \quad (1 \leq i \leq m) \quad (4)$$

and conditions of agreement of order r are satisfied at points of the surface S in the initial and boundary conditions, then (1)-(5) has a piecewise analytic solution in G_T , and that analyticity of the solution is only violated on characteristics emanating from S and falling inside G_T . Finally, on these characteristics the solution belongs to C^r . Orig. art. has 5 formulas.

Card 2/3

190819-66

ACCESSION NR: AP5021262

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Iv. Franko (L'vov State University) *55* *2*

SUBMITTED: 19Jan65

ENCL: 00

SUB CODE: MA

NO REF SOV: 003

OTHER: 002

MLL
Card 3/3

L 44140-66 EFT(d) IJP(c)

ACC NR: AP6023970

SOURCE CODE: UR/0376/66/002/004/0560/0570

AUTHOR: Mel'nik, Z. O.

ORG: L'vov State University (L'vovskiy gosudarstvennyy universitet)

TITLE: A method for the solution of the mixed problem for hyperbolic equations with discontinuous coefficients

SOURCE: Differentsial'nyye uravneniye, v. 2, no. 4, 1966, 560-570

TOPIC TAGS: second order differential equation, differential equation solution, mixed boundary value problem, HYPERBOLIC EQUATION

ABSTRACT: The mixed problem concerning hyperbolic equations with discontinuous coefficients is still poorly understood even in the case of only two independent variables. Consequently, a method is presented for the study of the mixed problem for a general two-dimensional second order hyperbolic equation for the case when the coefficients, the free term of the equation, and the initial conditions of the problem are discontinuous along certain lines. For simplicity, the author discusses only the case of a single line of discontinuity. Most of the developments utilize the results of V. E. Amolinaya and A. D. Myshkis (Uch. zap. Latv.

Card 1/2

L 44140-66

ACC NR: AP6023970

un-ta, t. XX, vyp. 3, 1958, pp. 87-104). The method which involves the reduction of the problem to the system of Volterra integral equations allows the establishment of the classical solution with an arbitrary degree of accuracy. Illustrative examples are also given. Orig. art. has: 32 formulas.

SUB CODE: 12/ SUBM DATE: 12Apr65/ ORIG REF: 003

Card 2/2

ACC NR: AP6012423

UR/0039/65/068/004/0632/0638

AUTHOR: Mel'nik, Z.O. (L'vov); Myshkis, A.D. (Kharkov)

ORG: None

TITLE: A mixed problem for a two-dimensional hyperbolic system of the first order, with discontinuous coefficients

SOURCE: Matematicheskiy sbornik, v. 68, no. 4, 1965, 632-638

TOPIC TAGS: partial differential equation, hyperbolic equation, ~~discontinuous hyperbolic equation, mixed hyperbolic equation problem~~

ABSTRACT: The authors consider a mixed problem for a linear hyperbolic system of partial differential equations on a plane x, t , with a set of p lines with jump discontinuities. The work generalizes certain prior studies of discontinuous coefficients. Existence and uniqueness proofs are developed for the generalized, piecewise continuous solution. The basic system is reduced first to a system of integro-functional equations, and then to a system of $m(1 + p)$ Volterra integral equations. The classic method of successive approximations is then used for the proof. Generalizations and outlook for the weakening of conditions imposed at the outset on the basic hyperbolic system are discussed. Comments on further developments are given. Orig. art. has 8 formulas..

SUB CODE: 12 /

SUBM DATE: 2Feb65 /

ORIG REF: 011

Card 1/1

UDC: 517.945.7

USSR/Medicine - Dysentery MEL'NIK-SHER, S. B.

FD 139

Card 1/1

Author : Kamenetskaya, R. P. and Mel'nik-Sher, S. B.

Title : The effect of certain preparations which excite or inhibit the activity of the nervous system on the development of immunity in rabbits suffering from experimental Grigor'yev-Shiga dysentery

Periodical : Zhur. mikrobiol. epid. i immun. 4, 68-70, Apr 1954

Abstract : The effects of caffeine, magnesium sulfate, sodium bromide, and adrenalin on phagocytic reactions and the production of anti-agglutinins in rabbits infected experimentally with Grigor'yev-Shiga Dysentery are discussed. The manner of infecting the rabbits and the effects of each of the preparations on healthy control animals are also described. No references are cited.

Institution : The Sanitary-Epidemiological Detachment (Chief-Colonel of the Medical Service N. Ya. Zil'ber)

Submitted : October 12, 1953

BAIANDIS, M.N.; MEL'NIKER, G.S.

The ESU-1 electronic level indicator. Biul.tekh.-ekon.inform.
no.1:37-39 '59. (MIRA 12:2)
(Liquid level indicators) (Electronic measurements)

AUTHORS: Anikin, A.G., Dugacheva, G.M., Mel'nikov, A.A. SOV/55-58-1-31/33
and Plate, A.F.

TITLE: On the Question About the Production of Pure Organic Preparations
(K voprosu o poluchenii chistykh organicheskikh preparatov)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya fiziko-matematicheskikh i
yestestvennykh nauk, 1958, Nr 1, pp 227-232 (USSR)

ABSTRACT: During the production of organic preparations defiling admixtures
can be avoided only then if not only the final preparation but
also the intermediate alloys are cleaned. The degree of purity
can be controlled best by the determination of the crystallizing
curves, since the crystallizing temperature is much more sensitive
with respect to defilements than e.g. the specific weight or
optical characteristic values. The authors describe the
application of this method for the synthesis of the trans - 1.2 -
di - n - butylcyclopentane obtained for the first time.
There are 4 references, 2 of which are Soviet, and 2 American.

ASSOCIATION: Kafedra khimii nefiti (Chair of Petroleum Chemistry)
Kafedra fizicheskoy khimii (Chair of Physical Chemistry)

SUBMITTED: March 5, 1957

Card 1/1

AUTHORS: Aleksanyan, V. T., Sterin, Kh. Ye., SOV/48-22-9-16/40
Mel'nikov, A. A., Plate, A F.

TITLE: Raman Spectra of Some Unsaturated Cyclic Hydrocarbons
(Spektry kombinatsionnogo rasseyaniya nekotorykh nepredel'nykh tsiklicheskikh uglevodorodov)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958,
Vol 22, Nr 9, pp 1073 - 1078 (USSR)

ABSTRACT: This paper is a report on the investigation of the Raman spectra of hydrocarbons with a double bond in the nucleus: 1-ethyl cyclopentene, 1-n-propyl cyclopentene-1, and 1-n-butyl cyclopentene (1. series), also of such compounds with a semicyclic double binding: ethylidene cyclopentane, n-propylidene cyclopentane and n-butylidene cyclopentane (2. series). It was also attempted to determine the correlation between the characteristic frequency of the C = C binding and the structural features of the olefines. The method which was used in the recording and in the measurement of the spectra were described already earlier (Refs 8,9). The spectra

Card 1/2

Raman Spectra of Some Unsaturated Cyclic Hydrocarbons SOV/48-22-9-16/40

of the hydrocarbons of the first mentioned series are known already from pertinent publications (Refs 13,14). The spectra of cyclopentene and of 1-methyl cyclopentene-1 (Refs 7,14)(1.series) and of methyl cyclopentane (Ref 14) (2.series) represent a substantial supplement to existing information. The characteristic frequencies in the spectra of both series are given in tables 1 and 2. The qualitative considerations given in this respect are without doubt only of a preliminary nature and necessitate a comparison with further experimental and theoretical evidence. There are 3 tables and 24 references, 14 of which are Soviet.

ASSOCIATION: Laboratoriya Komissii po spektroskopii Akademii nauk SSSR
(Laboratory of the Committee of Spectroscopy, AS USSR)
Kafedra khimii nefiti Moskovskogo gos. universiteta imeni
M.V.Lomonosova (Chair of Petroleum Chemistry at the Moscow
State University imeni M.V.Lomonosov)

Card 2/2

5(3)

AUTHORS:

Plate, A. F., Mel'nikov, A. A.,
Zelenko, R. A., Lykova, N. I.

SOV/20-123-6-24/50

TITLE:

The Synthesis of 1,2-Dialkylcyclopentanes and Their Separation
Into Cis-and Trans-Isomers (Sintez 1,2-dialkiltsiklopentanov
i razdeleniye ikh na tsis- i trans-izomery)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 6,
pp 1044 - 1047 (USSR)

ABSTRACT:

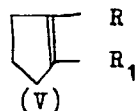
Ligroin and Diesel oil have become important in recent years
as fuel for jets and Diesel motors. Since the nature of the
hydrocarbons contained in them is barely known the authors
tried to synthesize 1,2-dialkylcyclopentanes with a composition
 $C_{10}H_{20}-C_{13}H_{26}$ and to separate them into trans- and cis-isomers.
A survey of publications ensues (Refs 1-8). The authors synthe-
sized 1-ethyl-2-n-propyl-, 1-ethyl-2-n-butyl- and 1,2-di-n-
butyl-cyclopentanes according to the given scheme. The constants
of the unsaturated hydrocarbons produced (III) are given in
table 1. Since the dehydration of the alcohols (II) can pro-
ceed in 3 directions, (III) can be a mixture of 3 types of

Card 1/3

The Synthesis of 1,2-Dialkylcyclopentanes and Their
Separation Into Cis- and Trans-Isomers

SOV/20-123-6-24/50

compounds (V), (VI) and (VII). (The spectra were investigated by V. T. Aleksanyan and Kh. Ye. Sterin in laboratoriya Kommissii po spektroskopii AN SSSR = Laboratory of the Spectroscopy-Commission AS USSR). It is possible to determine the composition of these mixtures from the Raman spectra. It was proved that in the mixtures the structures (V)



are predominant. As the boiling temperatures of unsaturated hydrocarbons are very close to one another in the dehydration of one and the same alcohol, they were not separated but their

mixtures were hydrated. The same hydrocarbon must result from each of those mixtures. For this purpose an alcohol solution at room temperature was used in the presence of platinized carbon (5% Pt) which was activated by palladium chloride (Ref 10). The 1-ethyl-2-n-propyl-cyclopentane, 1-ethyl-2-n-butyl-cyclopentane and 1,2-di-n-butyl-cyclopentane obtained were separated after purification on silicagel in cis- and trans-isomers by distillation in vacuum. The curves of the fractional distillation and the variation of the constants

Card 2/3

The Synthesis of 1,2-Dialkylcyclopentanes and Their
Separation Into Cis- and Trans-Isomers

SOV/20-123-6-24/50

according to fraction is given in figure 1. Table 2 shows the constants of the hydrocarbons obtained. The results (Fig 2) confirm and complete those of reference 13. The configurations of the stereoisomeric hydrocarbons ascribed to them by the authors, proved to be correct. There are 2 figures, 2 tables, and 13 references, 9 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: July 14, 1958, by B. A. Kazanskiy, Academician

SUBMITTED: July 10, 1958

Card 3/3

MEL'NIKOV, A. A. Cand Chem Sci -- (diss) "Synthesis of 1,2 - disubstituted
cyclopentane hydrocarbons, and their ~~separation~~^{division} into cis- and trans-isomers."
Mos. 1959. 13 pp (Mos Order of Lenin and Order of Labor Red Banner State Univ
im M. V. Lomonosov. Chem Faculty), 150 copies (KL, 49-59, 138)

MEL'NIKOV, A.A.

СБОРНИК СТАТОВИХ ДАНИХ, ПОСВЯЩЕННИЙ
ДЛЯ ИССЛЕДОВАНИЙ ЛИГРОНО-КАРБОННЫМ
СВЯЗЯМ. 12. ДИЗАЙНЕРСКИЕ ЦИКЛОГРАММЫ

А. А. МЕЛНИКОВ, А. В. ПЕТРОВ

VIII Mendeleev Congress for General and Applied Chemistry on
Section of Chemistry and Chemical Technology of Fuels,
publ. by Acad. Sci. USSR, Moscow 1979

abstracts of reports scheduled to be presented at above mentioned congress,
Moscow, 15 March 1979.

5(3)

SOV/79-29-4-5/77

AUTHORS: Plate, A. F., Mel'nikov, A. A.

TITLE: Dehydration of 1-Alkyl Cyclopentanol (Degidratatsiya 1-alkiltsiklopentanolov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 4, pp 1064-1072 (USSR)

ABSTRACT: There are nearly no data available on the dehydration of tertiary alkyl cycloalkanols with a hydroxyl group in the ring which leads to unsaturated cyclic hydrocarbons. This question arose because the authors tried to obtain 1-ethyl cyclopentene-1, 1-n.-propyl cyclopentene-1 and 1-n.-butyl cyclopentene-1 in absolutely pure state, without impurities in the form of isomers, and with a different position of the double bond, for syntheses to be carried out later. The dehydration of the alcohols in acid medium probably takes place according to scheme 1 and 2. The authors investigated the dehydration of 1-ethyl-, 1-n.-propyl-, and 1-n.-butyl cyclopentanol-1 in the presence of a saturated oxalic acid solution. Under the conditions investigated the formation of unsaturated hydrocarbons takes place both with the double bond in the ring and with the semicyclic double bond. It was found that 1-ethyl cyclopentene-1 does not change on boiling

Card 1/2

Dehydration of 1-Alkyl Cyclopentanol

SOV/79-29-4-5/77

with oxalic acid for 4 hours, that, however, ethylidene cyclopentane isomerized into 1-ethyl cyclopentene-1 (11.5%). The properties of two hydrocarbons hitherto unknown, i.e. propylidene cyclopentane and butylidene cyclopentane, are given. A certain amount of cyclopentanol was found to be formed during the Grignard synthesis of 1-n.-propyl cyclopentanol-1 on the reduction of cyclopentanone which cannot be easily removed from the alcohol obtained; on the dehydration of this alcohol, together with the added cyclopentanol, and subsequent distillation of the reaction products 1-n.-propyl cyclopentene-1 together with cyclopentanol forms an azeotropic mixture of the composition 73.7 : 26.3 in wt%. This mixture was previously regarded as a pure hydrocarbon. There are 4 figures, 3 tables, and 29 references, 12 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: March 24, 1958

Card 2/2

MEL'NIKOV, A.A.; LANIMANOV, O.D.; ASTROV, O.V., otv.red.; SEMIKINA,
T.F., red.izd-va; ANOKHINA, M.G., tekhn.red.

[Food industry of Kirghizistan; branches: flour and grain
milling, bread-baking, confectionery, macaroni, sugar, and oil
extraction] Pishchevaia promyshlennost' Kirgizii; otrasli:
mukomol'no-krupiansaia, khlebopekarnaia, konditerskaia, maka-
ronnaia, sakharnaia i masloboinaia. Frunze, Izd-vo Akad.nauk
Kirgizskoi SSR, 1960. 145 p. (MIRA 13:12)
(Kirghizistan--Food industry)

SLUTSKIY, S.S., kand.ekonom.nauk; PILIPCHUK, A.I., nauchnyy sotrudnik;
ANTONOV, M.F., kand.tekhn.nauk; MALYARCHUK, G.S., kand.tekhn.
nauk. Prinimali uchastiye: MEL'NIKOV, A.A., inzh.; ARSEN'YEVA,
A.I., inzh.; TEREKHOVA, Z.S., tekhnik; SIDOROVA, L.N., tekhnik;
ISSERLIS, I.I., tekhnik; KRAVCHENKO, A.I., inzh. POSTNIKOV,
S.A., inzh., red.; ZHULIN, V.K., otv. za vypusk; POKHLEBKINA,
M.I., tekhn.red.

[Efficient distribution of and organization of work at cargo
transfer points] Ratsional'noe razmeshchenie i organizatsiia
raboty punktov perevalki. Pod obshchei red. S.S.Slutskego.
Moskva, 1960. 127 p. (MIRA 14:2)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut
ekonomiki i ekspluatatsii vodnogo transporta. 2. TSentral'nyy
nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii
vodnogo transporta (for Slutskiy, Pilipchuk, Terekhova, Sidorova,
Isserlis). 3. Institut kompleksnykh transportnykh problem AN SSSR
(for Antonov, Malyarchuk, Kravchenko).
(Cargo handling)

HYEL MARKER A.A.

S-3100

69337

AUTHORS: Alexander V. I. Sterin, Kh. Ye., Mel'nikov, A.A. and
Platonov, V. I.

TITLE: Raman Spectra of 1,2-dialkylcyclopentane Stereoisomers

PERIODICAL: Optika i Spektroskopiya, 1960, Vol 5, No 3,
pp 328-327 (USSR)

ABSTRACT: The authors investigated the Raman spectra of stereo-
isomers of three 1,2-dialkylcyclopentanes: 1-ethyl-2-methyl-
1-ethyl-2-n-propyl-1,2-cyclopentane (I); 1-ethyl-2-n-butyl-
1,2-dimethyl-1,2-cyclopentane (II); 1,2-di-n-butylcyclopentane (III).
The methods of preparation and recording of the spectra
were as described earlier (Ref. 3). It was found that
the Raman spectra had certain features which could be used
to identify reliably the type of the stereoisomer. These
features were lines in the regions 1133-1147 cm⁻¹ and
885-910 cm⁻¹ in the spectra of the isomers with lower
boiling points, and lines in the regions 1137-1150,
1144-1160 and 892-893 cm⁻¹ in the spectra of the isomers
with higher boiling points. The isomers with the lower
boiling points (72.9, 91.0 and 122.6 °C for I, II and III
respectively) had cis-structure.
There are 1 table and 6 Soviet References.

Card
1/2

Card
2/2

SUBMITTED: May 14, 1959

Oxidation of 1-Allyl-2-methyl-2-butene
With Potassium Acetate in Methyl Acetate
Synthesis of 1-Allyl-2-methyl-2-butene

1959
1959, 1-11, 1-11, 1-11

The U.S. and U.K. references are: Long, F. A.,
Pritchard, J. H., J. Am. Chem. Soc., 70, 1001 (1948);
Rapson, W. B., Shettler, R. G., J. Chem. Soc.,
1940, 636; Chatterjee, D. N., J. Am. Chem. Soc., 77,
5131 (1955); Chatterjee, D. H., J. Am. Chem. Soc.,
77, 414 (1955); Danks, E. A., Fortna, W. F., J. Chem.
Soc., 1951, 1951.

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy
universitet)

SUBMITTED: April 5, 1959

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S/079/60/030/04/44/080
B001/B002

5.3400

AUTHORS: Plate, A. F., Mel'nikov, A. A., Italinskaya, T. A.,
Zelenko, R. A.

TITLE: Oxidation¹ of 1-Phenylcyclopentene-1 With Performic Acid and
the Synthesis of 1-Methyl- and 1-Ethyl-2-phenylcyclopentane

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 4, pp. 1250-1255

TEXT: With reference to the papers of Refs. 1-3, and in continuation of their own papers on the synthesis of some 1,2-dialkylcyclopentanes of the composition C₁₀-C₁₃ (Ref. 4), the authors here describe the first two

members of 1-alkyl-2-phenylcyclopentane. For obtaining the synthesis of 2-phenylcyclopentanone-1, they examined the oxidation of 1-phenylcyclopentene-1 with performic acid (Refs. 5-7). The monoformate of 1-phenylcyclopentenediol-1,2 (Refs. 5-7) was obtained by oxidation of 1-phenylcyclopentene-1 with performic acid. This oxidation was made by means of 85% performic acid and hydrogen peroxide (Scheme 1). The data given in Table 1 show that the slightest rise in temperature causes a considerable reduction of the 2-phenylcyclopentanone yield (from 66% to 40%), and a

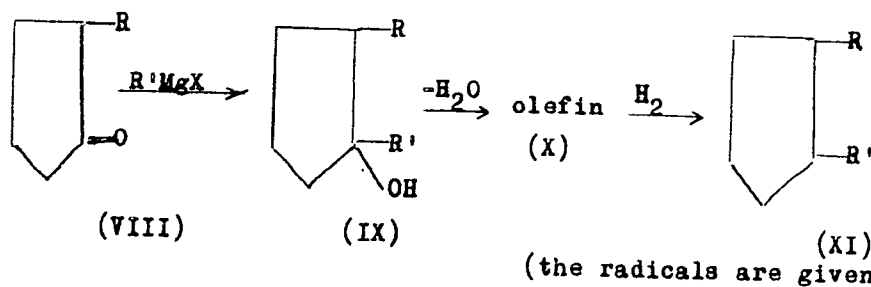
Card 1/3

Oxidation of 1-Phenylcyclopentene-1 With Performic S/079/60/030/04/44/080
Acid and the Synthesis of 1-Methyl- and 1-Ethyl- B001/B002
2-phenylcyclopentane

considerable increase in the yield of γ -benzoylbutyric acid (from 8% to 14%). A reduction of the concentration of the initial hydrogen peroxide to 19% (experiment No. 3), and a reduced temperature (23° - 24°) cause a much lower ketone yield (29%). The yield of keto acid remains high, probably due to the further oxidation of the newlydeveloped ketone. Approximately 30% of non-reacting hydrocarbon remains in the reaction mass. Under such comparatively easy conditions, neither glycol and its monoformate, nor the α -oxide were separated. The monoformate of glycol which developed, was converted into 2-phenylcyclopentanone-1 (Scheme 2) in a strongly acid medium (H_2SO_4). In this process, the proton was added to carbinol oxygen under the formation of cation (V), and thence, the tautomeric cation (VI) developed. A decomposition of (VI) also takes place, and formic acid and the carbonium ion (VII) develop. The latter is rearranged into 2-phenylcyclopentanone-1 (VIII a). The newly obtained 1-methyl- and 1-ethyl-2-phenylcyclopentane was synthesized according to scheme 3:

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Oxidation of 1-Phenylcyclopentene-1 With Performic S/079/60/030/04/44/080
 Acid and the Synthesis of 1-Methyl- and 1-Ethyl- B001/B002
 2-phenylcyclopentane



The constants of the synthesized hydrocarbons are given in Table 2. Under the above conditions the oxidation of 2-phenylcyclopentanone-1 only yielded γ -benzoylbutyric acid. There are 2 tables and 23 references, 9 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: April 3, 1959

Card 3/3

S/079/60/030/04/45/080
B001/B002

5.3400

AUTHORS:

Plate, A. F., Mel'nikov, A. A., Ovezova, A. A.

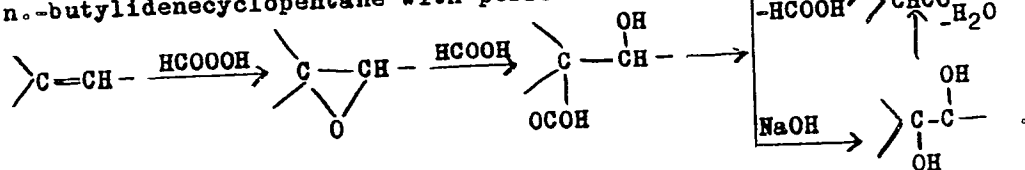
TITLE:

Oxidation of Olefins With Performic Acid

PERIODICAL:

Zhurnal obshchey khimii, 1960, Vol. 30, No. 4, pp. 1256-1258

TEXT: The authors used the single-stage synthesis of 2-alkylcyclopentanones-1 by oxidation of 1-alkylcyclopentenes-1 with performic acid (Ref. 1), which they had formerly developed, also for the synthesis of other asymmetrical ketones. 3-ethylpentanone-2 and methyl-, ethyl-, n.-propylcyclopentylketone in yields of 65.2%, 52.7%, 50.2%, 48.8% were obtained by the oxidation of 3-ethylpentene-2 and ethylidene-, n.-propylidene- and n.-butylidenecyclopentane with performic acid in one single stage.



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Oxidation of Olefins With Performic Acid

S/079/60/030/04/45/080
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The ketones are obtained with and without the separation of intermediate products, i.e. single-, and double-stage. 3-ethylpentene-2 and ethylidene-cyclopentane were oxidized with the above acid, and before the separation of the monoformates of the glycols, formic acid and water were distilled off under reduced pressure. The yields of the monoformates of 3-ethylpentanediol-2,3 and 1-(1-ethylol)-cyclopentanol-1 were 44.6% and 46%. 3-ethylpentanediol-2,3 and 1-(1-ethylol)-cyclopentanol-1 were obtained by the saponification of monoformates. The dehydration of the two compounds with 85% formic acid yielded up to 70% of 3-ethylpentanone-2 and methylcyclopentylketone. All ketones obtained, were identified by means of the semicarbazones and 2,4-dinitrophenylhydrazone (Tables 1,2). The advantage of this method is the fact that the oxidation of unsaturated hydrocarbons, and the separations of the ketones, does not meet with experimental difficulties. Ketones are obtained in the pure state and in good yields. The only thing which may be more difficult is the separation of the initial products (unsaturated hydrocarbons). There are 2 tables and 13 references, 5 of which are Soviet. X

Card 2/3

Oxidation of Olefins With Performic Acid

S/079/60/030/04/45/080
B001/B002

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University) ✓

SUBMITTED: April 3, 1959

Card 3/3

MEL'NIKOV, Aleksandr Alekseyevich; SOKOLOV, B.M., otv. red.;
SKRIPKINA, Z.I., red.izd-va; ANOKHINA, M.G., tekhn. red.

[Effectiveness of concentrating and mechanizing the production
of building materials in Kirghizistan] Effektivnost' kontsentratsii i mekhanizatsii proizvodstva stroitel'nykh materialov v Kirgizii. Frunze, Izd-vo Akad.nauk Kirgizskoi SSR, 1962. 166 p.
(MIRA 16:2)

(Kirghizistan--Building materials industry)

ALYSHEBAYEV, D.A., nauchn. sotr.; GUSHCHIN, A.F., nauchn. sotr.;
ABDURAKHMANOV, I., nauchn. sotr.; MEL'NIKOV, A.A., nauchn.
sotr.; DRUKER, B.A., nauchn. sotr.; IMANALIYEV, M., nauchn.
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POPOVA, M.G., tekhn. red.

[Prospects for the development and distribution of the most
important branches of the Kirghiz industry] Perspektivy raz-
vitiia i razmeshcheniia vazhneishikh otraslei promyshlennosti
Kirgizii. Frunze, Izd-vo AN Kirg.SSR, 1963. 154 p.

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1. Akademiya nauk Kirgizskoy SSR Frunze. Institut ekonomiki.
2. Institut ekonomiki AN Kirg.SSR (for all except Yesipov,
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(Kirghizistan--Industries, Location of)

NOR, Aleksandr Alekseyevich; MATYUSHENKO, Yuriy Pavlovich;
MEL'NIKOV, Andrey Alekseyevich; LIPAKOV, Aleksey
Nikandrovich; VIRABOV, A.A., inzh., retsenzent;
BARUZDIN, M.A., inzh., otv. red.

[Engineers of electric mine locomotives] Mashinist rud-
nichnogo elektrovoza. Moskva, Izd-vo "Nedra," 1964. 161 p.
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MEL'NIKOV, A.A., kand. ekonom. nauk

Effectiveness of capital investments in the building materials
industry. Stroi. mat. 10 no.11:39-40 N '64.

(MIRA 18:1)

AGEYEV, V.M., kand. ekon. nauk; REKITAR, Ya.A.; USTIMENKO, V.V., ekonomist; MEL'NIKOV, A.A., kand. ekon. nauk; LUKASHEVICH, V.A., ekonomist; FEL'ZENBAUM, V.G., kand. ekon. nauk; SERGEYEVA, K.A., inzh.; CHUDNOVSKIY, D.M., nauchn. red.

[Method of calculating the economic efficiency of technological progress in the building materials and structural elements industry; using the example of several branches and types of production] Metody rascheta ekonomicheskoi effektivnosti tekhnicheskogo progressa v promyshlennosti stroitel'nykh materialov i konstruktсии (na primere nekotorykh otraslei i vidov proizvodstv). Moskva, Stroiizdat, 1965. 157 p. (MikA 18:4)

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Hemorrhage

Rare case of nosebleed. Vest. oto-rin. 14, no. 3, 1952

Monthly List of Russian Accessions, Library of Congress, October 1952, Unclassified.

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and capillary fragilit in hypertension. Klin. med., Moskva 30 no. 6:
85 June 1952. (CLML 22:5)

1. Of the Hospital Therapeutic Clinic (Director -- Prof. M. N.
Vasilevskiy), Yaroslavl' Medical Institute.

MEL'NIKOV, A.A. (Yaroslavl')

Effect of vitamin C and calcium chloride on vascular reactivity and water metabolism in nephritis. Klin.med. 33 no.4:85-86 Ap '55.

(NEPHRITIS, physiology, (MLRA 8:7)

calcium chloride & vitamin C pressor reaction to cold & nicotine)

(CHLORIDES, effects,

calcium chloride, on pressor reaction to cold & nicotine in nephritis)

(VITAMIN C, effects,,

on pressor reaction to cold & nicotine in nephritis)

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vasopressor reaction to cold & nicotine in nephritis, eff. of calcium chloride & vitamin C)

MEL'NIKOV, A.A. (Yaroslavl')

Importance of vitamin C in the prophylaxis of nervous and vascular
asthenization and hypertension. Vrach.delo no.10:1023-1024 0 '59.
(MIRA 13:2)
(HYPERTENSION) (NERVOUS SYSTEM--DISEASES) (ASCOBBIC ACID)

MEL'NIKOV, A. A., Cand Med Sci — (diss) "Experience in treating hypertension with Vitamin C and calcium chloride," Moscow, 1960, 16 pp, 200 cop. (Academy of Medical Sciences USSR) (KL, 45-60, 128)

MEL'NIKOV, A.A., aspirant

Allergic reactivity in chronic tonsillitis. Kaz.med.zhur.
no.5:44-45 S=O '62. (MIRA 16:4)

1. Kafedra bolezney ukha, gorla, nosa (zav. - prof. B.N.Lukov
[deceased]) i kafedra patologicheskoy fiziologii (zav. - prof.
I.V.Kolpakov) Kuybyshevskogo meditsinskogo instituta.
(TONSILS—DISEASES) (ALLERGY)

MEL'NIKOV, A.A.

Some characteristics of the sensitization of the organism in
chronic tonsillitis. Zhur. ush., nos. i gorl. bol. 23 no.5:
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1. Iz kafedry otorinolaringologii (zav. - prof. I.B. Soldatov)
i kafedry patologicheskoy fiziologii (zav. - prof. I.V.Kol-
pakov) Kuybyshevskogo meditsinskogo instituta.

MEL'NIKONIS, A.A., inzh.

Mechanized removal of ice from rivers. Mekh. stroi. 18 no.2:21
F '61. (MIRA 14:2)

1. Upravleniye stroitel'stva Krasnoyarskoy gidroelektricheskoy
stantsii.

(Ice on rivers, lakes, etc.)

DOMANSKIY, L.TS., inzh.; MEL'NIKONIS, A.A., inzh.

Carrying out earth and rock moving operations in second sequence
foundation pits. Energ. stroi. no.41:27-31 '64. (MIRA 17:11)

SLUTSKIY, S., kand.ekonom.nauk; SHAPOSHNIKOV, Ye., kand.tekhn.nauk;
MEL'NIKOV, A., inzh.

Length of the working day for the navigating personnel in summer
and during periods between navigations. Rech. transp. 22 no.11:
20-21 N '63. (MIRA 16:12)

MEL'NIKOV, A., aspirant

Review the watch duty schedules on self-propelled ships of the river fleet. Rech.transp. 23 no.11:10-12 N '64.

(MIRA 18:3)

1. TSentral'nyy nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii vodnogo trnasporta.

MEL'NIKOV, A., inzh.

For year-round profitable operation of ships. Rech. transp.
24 no.6:13-14 '65. (MIRA 18:8)

LIPAKOV, A.N.; MEL'NIKOV, A.A.; STUPIN, G.G.; TKALENKO, A.P.;
SHCHERBAKOV, M.I.; PETUKHOV, N.N., *otv. red.*;
ABARBARCHUK, F.I., *red.izd-va*; OVSEYENKO, V.G., *tekhn.red.*

[Gyroflywheel mine locomotive] Shakhtnye inertsionnye lo-
komotivy. Moskva, Gosgortekhzdat, 1963. 122 p.

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(Mine railroads)

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Some results of the investigation of suspension characteristics
of a motortruck. Avt.prom. 28 no.2:30-34 F '62. (MIRA 15:2)

1. Gor'kovskiy politekhnicheskii institut.
(Motortrucks---Springs)

(A) L 8582-66

ACC NR. AP5021517

SOURCE CODE: UR/0113/65/000/008/0020/0022

AUTHOR: Rozov, R. A.; Panfilov, V. M.; Blkulich, V. A.; Yurin, I. L.; Koynashov, V. V.; Mel'nikov, A. A. (Candidate of technical sciences)

ORG: Bryansk Automobile Factory (Bryanskiy Avtozavod); Gorkiy Polytechnic Institute (Gor'kovskiy politekhnicheskiy institut)

TITLE: Hydropneumatic suspension for high-power automobiles

SOURCE: Avtomobil'naya promyshlennost', no. 8, 1966, 20-22

TOPIC TAGS: motor vehicle, vehicle engineering, vehicle component, pneumatic device

ABSTRACT: The Bryansk Automobile Plant (Bryanskiy avtozavod) developed jointly with the Gor'kiy Polytechnic Institute (Gor'kovskiy politekhnicheskiy institut) a hydropneumatic suspension for high-power 8 x 8 automobiles with a gross weight exceeding 10 t. The suspension is independent, has an automatic body control (three positions), and a variable clearance. The design of the front end suspension is shown as Fig. 1. The article gives a detailed description of the system, including the design of the hydropneumatic spring, its operating parameters, the suspension characteristic, and the shock-absorber characteristic. Orig. art. has: 6 figures and 1 table.

Card 1/2

UDC: 629.11.012.8

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ACC NR: AP6021517

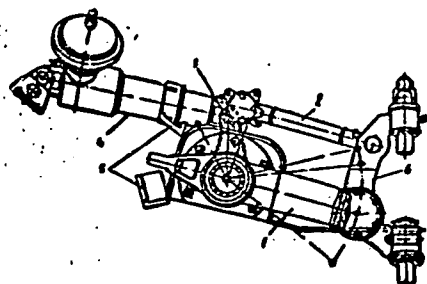


Fig. 1. Front end automobile suspension (side view). 1 - balance rod; 2 - reaction bar (both in the longitudinal plane); 3 - crank; 4 - hydrospring; 5 - limiters; 6 - wheel-holding bearing.

SUB CODE: 13 / SUBM DATE: none / ORG REF: 001

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Card 2/2